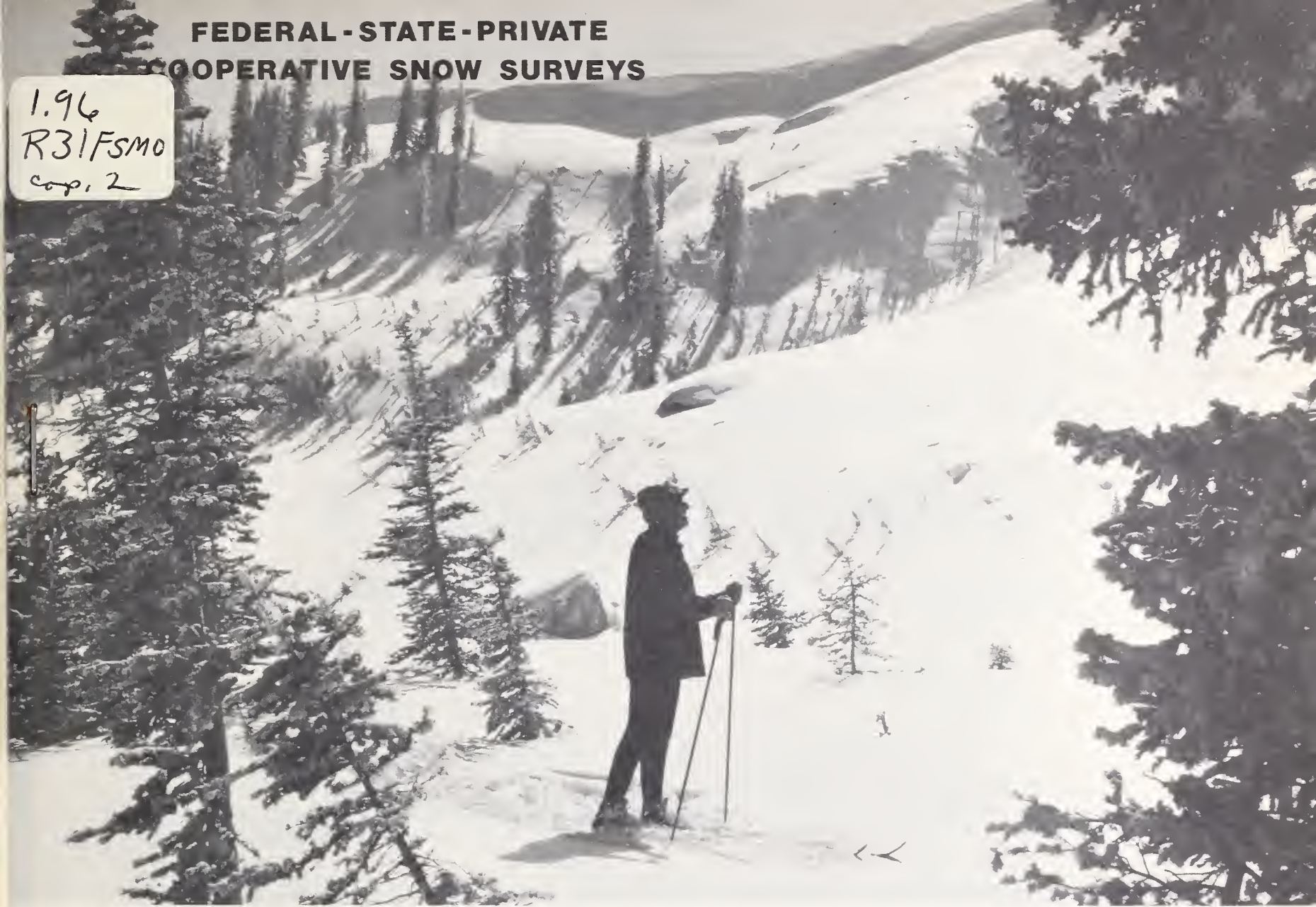


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# **WATER SUPPLY OUTLOOK FOR MONTANA**

Prepared by  
**U. S. DEPARTMENT of AGRICULTURE ★ SOIL CONSERVATION SERVICE**  
Collaborating with  
**MONTANA AGRICULTURAL EXPERIMENT STATION**

Data included in this report were obtained by the agencies named above in cooperation with Federal, State, and private organizations listed on the inside back cover of this report.

AS OF  
**APR. 1, 1971**



## TO RECIPIENTS OF WATER SUPPLY OUTLOOK REPORTS:

Most of the usable water in western states originates as mountain snowfall. This snowfall accumulates during the winter and spring, several months before the snow melts and appears as streamflow. Since the runoff from precipitation as snow is delayed, estimates of snowmelt runoff can be made well in advance of its occurrence. Streamflow forecasts published in this report are based principally on measurement of the water equivalent of the mountain snowpack.

Forecasts become more accurate as more of the data affecting runoff are measured. All forecasts assume that climatic factors during the remainder of the snow accumulation and melt season will interact with a resultant average effect on runoff. Early season forecasts are therefore subject to a greater change than those made on later dates.

The snow course measurement is obtained by sampling snow depth and water equivalent at surveyed and marked locations in mountain areas. A total of about ten samples are taken at each location. The average of these are reported as snow depth and water equivalent. These measurements are repeated in the same location near the same dates each year.

Snow surveys are made monthly or semi-monthly from January 1 through June 1 in most states. There are about 1900 snow courses in Western United States and in the Columbia Basin in British Columbia. Networks of automatic snow water equivalent and related data sensing devices, along with radio telemetry are expanding and will provide a continuous record of snow water and other parameters of key locations.

Detailed data on snow course and soil moisture measurements are presented in state and local reports. Other data on reservoir storage, summaries of precipitation, current streamflow, and soil moisture conditions at valley elevations are also included. The report for Western United States presents a broad picture of water supply outlook conditions, including selected streamflow forecasts, summary of snow accumulation to date, and storage in larger reservoirs.

Snow survey and soil moisture data for the period of record are published by the Soil Conservation Service by states about every five years. Data for the current year is summarized in a West-wide basic data summary and published about October 1 of each year.

## PUBLISHED BY SOIL CONSERVATION SERVICE

The Soil Conservation Service publishes reports following the principal snow survey dates from January 1 through June 1 in cooperation with state water administrators, agricultural experiment stations and others. Copies of the reports for Western United States and all state reports may be obtained from Soil Conservation Service, Western Regional Technical Service Center, Room 209, 701 N. W. Glisan, Portland, Oregon 97209.

Copies of state and local reports may also be obtained from state offices of the Soil Conservation Service in the following states:

STATE	ADDRESS
Alaska	P. O. Box "F", Palmer, Alaska 99645
Arizona	6029 Federal Building, Phoenix, Arizona 85025
Colorado (N. Mex.)	12417 Federal Building, Denver, Colorado 80202
Idaho	Room 345, 304 N. 8th. St., Boise, Idaho 83702
Montana	P. O. Box 970, Bozeman, Montana 59715
Nevada	P. O. Box 4850, Reno Nevada 89505
Oregon	1218 S. W. Washington St., Portland, Oregon 97205
Utah	4012 Federal Bldg., 125 South State St., Salt Lake City, Utah 84111
Washington	360 U.S. Court House, Spokane, Washington 99201
Wyoming	P. O. Box 2440, Casper, Wyoming 82601

## PUBLISHED BY OTHER AGENCIES

Water Supply Outlook reports prepared by other agencies include a report for California by the Water Supply Forecast and Snow Surveys Unit, California Department of Water Resources, P. O. Box 388, Sacramento, California 95802 --- and for British Columbia by the Department of Lands, Forests and Water Resources, Water Resources Service, Parliament Building, Victoria, British Columbia



# ***WATER SUPPLY OUTLOOK FOR MONTANA***

and  
FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS

*Issued by*

**KENNETH E. GRANT**

ADMINISTRATOR  
SOIL CONSERVATION SERVICE  
WASHINGTON, D.C.

|||||

*Released by*

**A. B. LINFORD**

STATE CONSERVATIONIST  
SOIL CONSERVATION SERVICE  
Bozeman, Montana

*In Cooperation with*

**J. A. ASLESON**

DIRECTOR  
Montana Agricultural Experiment Station

|||||

*Report prepared by*

**PHILLIP E. FARNES, Snow Survey Supervisor**

and

**GEORGE P. CLAGETT, Assistant Snow Survey Supervisor**

SOIL CONSERVATION SERVICE  
P.O. Box 98  
Bozeman, Montana 59715



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MONTANA WATER SUPPLY OUTLOOK  
April 1, 1971

\* \* \* \* \*

\* Nearly all snow courses had a large increase  
\* in water content during March. The entire  
\* Missouri River drainage has a well above  
\* average snow pack, with record or near record  
\* amounts in southwestern and southcentral  
\* Montana.

\* \* \* \* \*

COLUMBIA RIVER BASIN

Snow - All Columbia River drainages in Montana have a snow pack about 125 percent average and 20 to 50 percent more than last year. Some of the higher elevation snow courses are maximum of record for this date in the Flathead, Clark Fork and Bitterroot drainages. Many are second to fifth highest of record. Snow is dense for this time of year.

Soil moisture is average to above average.

Streamflow - The Bitterroot headwaters are forecast to produce about 135 percent average and the Kootenai River about 110 percent average. Runoff from other streams in the Columbia drainage should be about 120 to 125 percent average. In all drainages, this year's spring and summer runoff will exceed that of last year.

MISSOURI RIVER DRAINAGE

Snow - The heavy snow pack continues to persist in all southwestern drainages. Large water equivalent increases were noted at all snow courses. All Missouri River drainages have 135 to 145 percent average



snow pack. Many snow courses in the Jefferson, Madison, Gallatin and Marias River headwaters and the mountains of central Montana have the largest water equivalent recorded for this time of year. Many snow courses are fourth to second highest of record. With the exception of the Judith-Musselshell area, all drainages have a larger snow pack than a year ago.

Soil moisture is average to above average with some areas being near field capacity.

Streamflow - Streams in southwestern Montana are forecast to produce more runoff during the spring and summer months than was recorded last year. Some forecasts are higher than previous maximums observed during the last 35 years. Large volumes can be expected from streams in central Montana. Elsewhere, above average runoff is expected.

#### YELLOWSTONE RIVER DRAINAGE

Snow - Some snow courses have more than the previously recorded maximum water contents. Most of the remaining courses are second or third highest of record. The Yellowstone drainage above the Bighorn River has a snow pack that is about 20 percent more than a year ago and 146 percent average. Snow cover in the Bighorn drainage in Wyoming is comparable. The Little Bighorn has less snow than a year ago, but is 136 percent average.

Soil moisture is near to above average.

Streamflow - Runoff is forecast to be 35 to 60 percent above average on streams in the Yellowstone drainage. In all areas, flows should exceed those of last year. Predicted volumes are generally near or above the highest observed during the last 40 years.





# SUMMARY of SNOW MEASUREMENTS (COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF:	
		Last Year	Average

## COLUMBIA RIVER DRAINAGE

Kootenai	18	152	123
Flathead	28	124	128
Upper Clark Fork	26	122	125
Lower Clark Fork	10	134	126
Bitterroot	13	126	123

## MISSOURI RIVER DRAINAGE

Jefferson	34	131	147
Madison	18	127	143
Gallatin	13	106	146
Missouri Main Stem	11	112	138
Judith-Musselshell	8	91	136
Marias-Teton-Sun	11	143	148
Milk (Headwaters)	3	144	140

## YELLOWSTONE RIVER DRAINAGE

Yellowstone	25	117	146
Little Bighorn	7	86	136



# SOIL MOISTURE

DRAINAGE BASIN and/or STATION		Profile (Inches)			Date of Survey	Soil Moisture (Inches)		
Name	Elevation	Depth	Capacity	This Year		Last Year	Average †	
<u>COLUMBIA RIVER BASIN</u>								
<u>Kootenai</u>								
Baree Trail	3800	48	7.5	4/01	6.8	6.5	6.5	
Murphy Lake R. S.	3000	48	22.6	3/30	20.2	21.1	21.1	
Raven R. S.	3050	48	23.0	4/01	16.8	21.5	21.0	
<u>Flathead</u>								
Desert Mountain	5600	54	8.4	4/01	8.2	6.4	7.6	
Marias Pass	5250	54	6.5	3/28	6.2	4.8	5.5	
<u>Clark Fork</u>								
Black Pine	7100	48	10.0	4/01	7.8	7.3	7.4	
Lubrecht Forest	4100	48	26.8	4/02	18.1	-	22.0	
Seeley Lake R. S.	4030	48	11.9	4/01	11.2	8.2	9.9	
Skaikaho Summit	7260	48	10.8	4/01	10.0	9.5	9.7	
<u>Bitterroot</u>								
Gibbons Pass	7100	48	7.1	3/31	6.2	3.7	5.3	
Lolo Pass	5250	48	10.6	3/30	6.5	5.0	6.3	
<u>MISSOURI RIVER BASIN</u>								
<u>Beaverhead</u>								
Lakeview	6700	48	15.3	4/01	6.8	5.8	7.7	
<u>Madison</u>								
West Yellowstone	6700	48	6.5	3/28	2.9	1.5	2.7	
<u>Gallatin</u>								
Bridger Bowl	7250	48	17.0	3/31	16.3	16.6	16.3	
College Site No. 2	4856	54	17.7	4/02	17.8	17.0	16.4	
Lick Creek	6860	48	18.8	3/30	17.4	17.3	17.2	
Twenty-One Mile	7150	48	10.0	3/28	5.8	1.9	3.7	
<u>Missouri Main Stem</u>								
Kings Hill	7420	48	11.8	4/01	4.8	6.3	6.8	
Stemple Pass	6350	48	5.9	3/31	4.0	3.6	4.4	
<u>Milk</u>								
Beaver Creek	3950	48	10.9	3/31	18.4	18.1	-	
Rocky Boy	4700	36	10.1	3/31	7.5	7.3	-	
<u>Yellowstone</u>								
Battle Ridge	6020	48	17.6	3/31	15.2	13.5	14.0	
Northeast Entrance	7350	48	9.4	4/03	5.3	5.0	6.2	





# RESERVOIR STORAGE (Thousand Acre Feet) END OF MONTH

Basin or Stream	RESERVOIR	Usable Capacity	Usable Storage		
			This Year	Last Year	Average

## COLUMBIA RIVER BASIN

Flathead	Hungry Horse	3,428.0	1,980.0	1,993.0	2,077.0
	Flathead Lake	1,791.0	732.5	726.5	746.7
	Camas (4)	45.2	23.8	19.9	30.1
	Mission Valley (8)	100.3	44.8	27.7	35.4
Clark Fork	Georgetown Lake	31.0	24.9	24.8	22.1
	Noxon Rapids	334.6	205.6	183.5	188.0
	Nevada Creek	12.6	9.0	6.4	6.6
Bitterroot	Como	34.9	14.4	13.0	13.4
	Painted Rocks	31.7	23.8	18.2	19.7

## MISSOURI RIVER BASIN

Beaverhead	Clark Canyon	328.9	137.3	144.8	135.6
	Lima	84.0	45.7	47.3	24.2
Ruby	Ruby	38.8	31.5	36.9	29.9
Madison	Hebgen Lake	377.5	282.0	266.3	176.7
	Ennis Lake	41.0	36.0	36.7	35.5
Gallatin	Middle Creek	8.0	4.8	4.4	3.9
Missouri	Canyon Ferry	2,043.0	1,444.0	1,558.0	1,546.0
	Hauser & Helena	61.9	61.3	73.1	50.5
	Lake Helena	10.4	10.2	10.7	7.3
	Holter Lake	81.9	80.7	78.0	54.7
	Smith River	10.7		5.5	7.0
	Durand	7.0		4.0	5.0
	Martinsdale	23.1		5.2	8.0
	Deadman's Basin	72.2		33.8	48.7
	Fort Peck	19,410.0	16,580.0	16,200.0	11,050.0
	Gibson	105.0	46.9	17.7	51.0
Sun	Willow Creek	32.3	23.6	20.6	22.0
	Pishkun	32.0	16.7	17.4	17.5
	Lower Two Medicine	16.6		-	0.0
	Four Horns	19.2	13.6	-	12.2
Marias	Swift	30.0	18.1	-	21.5
	Lake Frances	112.0	85.8	83.3	84.2
	Tiber	1,347.0	462.2	525.3	643.7
	Fresno	127.2	95.8	75.1	82.1
Milk	Nelson	66.8	47.1	44.4	40.2
	Lake Sherburne	66.1	24.2	19.6	22.8
	Mystic Lake	20.8	3.5	3.8	5.0
Yellowstone	Tongue River	68.0		39.1	28.7
	Cooney	27.5	21.0	16.4	15.2
Bighorn	Bighorn Lake	1,356.0	862.5	757.1	717.4



# STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR			PAST RECORD	
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average

## COLUMBIA RIVER BASIN

FISHER RIVER					
Libby (near)	350	117	Apr-Sept	232	298
	335	119	Apr-July	218	281
KOOTENAI RIVER					
Libby (at)	8750	109	Apr-Sept	5362	8025
	7750	111	Apr-July	4628	6956
YAAK RIVER					
Troy (near)	680	119	Apr-Sept	408	573
	660	120	Apr-July	390	549
KOOTENAI RIVER					
Leonia (at)	10250	111	Apr-Sept	6256	9198
	9080	112	Apr-July	5409	8072
	7250	112	Apr-June	4494	6463
RACETRACK CREEK					
Anaconda (near)	39.0	114	Apr-Sept	37.7	34.1
	31.7	115	Apr-July	30.6	27.6
FLINT CREEK					
Boulder Creek (below)(3)	82.0	118	Apr-Sept	78.4	69.6
	67.0	122	Apr-July	61.3	55.1
MIDDLE FORK ROCK CREEK					
Philipsburg (near)	97.5	133	Apr-Sept	81.5	73.4
	89.0	134	Apr-July	73.3	66.2
NEVADA CREEK					
Finn (near)	25.5	123	Apr-Sept		20.7
	24.2	125	Apr-July		19.3
BLACKFOOT RIVER					
Bonner (near)	1230	122	Apr-Sept	977	1008
	1130	124	Apr-July	884	912
	980	124	Apr-June	768	788
CLARK FORK RIVER					
Milltown (above)(4)	930	123	Apr-Sept	789	755
	830	126	Apr-July	705	659
	710	126	Apr-June	575	562
CLARK FORK RIVER					
Missoula (above)	2160	123	Apr-Sept	1786	1763
	1960	125	Apr-July	1590	1572
	1690	125	Apr-June	1343	1350

(3) Sum Flint Creek at Maxville and Boulder Creek at Maxville.

(4) Difference in observed flow Clark Fork above Missoula and Blackfoot near Bonner.





# STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR			PAST RECORD	
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average
WEST FORK BITTERROOT RIVER					
Conner (near)(5)	235	138	Apr-Sept	197	170
	220	139	Apr-July	183	158
EAST FORK BITTERROOT RIVER					
Conner (near)	223	131	Apr-Sept	182	170
	204	132	Apr-July	165	154
BITTERROOT RIVER					
Darby (near)	740	133	Apr-Sept	629	558
	690	133	Apr-July	582	517
	600	132	Apr-June	493	453
SKALKAHO CREEK					
Hamilton (near)	62.0	111	Apr-Sept	55.9	55.8
	55.0	113	Apr-July	48.2	48.9
BURNT FORK CREEK					
Stevensville (near)(10)	41.5	122	Apr-Sept	33.8	34.2
	36.3	122	Apr-July	29.4	29.6
BITTERROOT RIVER					
Missoula (at)(6)	1750	119	Apr-Sept	1536	1466
	1680	123	Apr-July	1424	1360
	1430	122	Apr-June	1194	1175
CLARK FORK RIVER					
Missoula (below)	3910	122	Apr-Sept	3323	3229
	3640	124	Apr-July	3014	2932
	3120	124	Apr-June	2537	2525
ST. REGIS RIVER					
St. Regis (near)	442	133	Apr-Sept		332
	420	133	Apr-July		316
CLARK FORK RIVER					
St. Regis (at)	5430	123	Apr-Sept	4452	4398
	5000	125	Apr-July	4048	3993
	4350	126	Apr-June	3402	3451
NORTH FORK FLATHEAD RIVER					
Columbia Falls (near)	2350	117	Apr-Sept		2023
	2200	119	Apr-July		1846
	1880	120	Apr-June		1562
MIDDLE FORK FLATHEAD RIVER					
West Glacier (near)	2340	121	Apr-Sept	1878	1931
	2200	122	Apr-July	1754	1791
	1860	122	Apr-June	1555	1521
SOUTH FORK FLATHEAD RIVER					
Columbia Falls (near)(7)	3030	128	Apr-Sept	2245	2358
	2900	130	Apr-July	2128	2235
	2550	130	Apr-June	1936	1967

(5) Adjusted for storage in Painted Rocks Reservoir.

(6) Difference in observed flow Clark Fork above and below Missoula.

(7) Adjusted for storage in Hungry Horse Reservoir.

(10) Adjusted for diversion into Sunset Highline Canal.



# STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR			PAST RECORD	
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average
FLATHEAD RIVER					
Columbia Falls (at)(7)	7900	122	Apr-Sept	5791	6467
	7450	124	Apr-July	5464	6003
	6410	124	Apr-June	4871	5155
SWAN RIVER					
Big Fork (near)	830	120	Apr-Sept	771	688
	740	122	Apr-July	691	607
	605	122	Apr-June	576	496
FLATHEAD RIVER					
Polson (near)(8)	9480	123	Apr-Sept	6828	7701
	8950	125	Apr-July	6454	7157
	7650	125	Apr-June	5674	6123
CLARK FORK RIVER					
Plains (near)(8)	15610	125	Apr-Sept	11901	12482
	14300	125	Apr-July	10977	11448
	12300	125	Apr-June	9509	9802
THOMPSON RIVER					
Thompson Falls (near)	338	120	Apr-Sept		283
	310	122	Apr-July		253
PROSPECT CREEK					
Thompson Falls (at)	195	128	Apr-Sept		152
	185	129	Apr-July		143
CLARK FORK RIVER					
Whitehorse Rapids (at)(9)	17400	125	Apr-Sept		13987
	16000	125	Apr-July		12787
	13700	125	Apr-June		10953

(7) Adjusted for storage in Hungry Horse Reservoir.

(8) Adjusted for storage in Hungry Horse Reservoir and Flathead Lake.

(9) Adjusted for storage in Hungry Horse, Flathead Lake and Noxon Rapids Reservoirs.





# STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR			PAST RECORD	
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average

## MISSOURI RIVER BASIN

BEAVERHEAD RIVER					
Grant (near)(11)(12)	215	203	Apr-Sept	198	106
	200	222	Apr-July	173	90
RUBY RIVER					
Alder (near)	127	159	Apr-Sept	131	80.0
	110	164	Apr-July	113	67.0
BIG HOLE RIVER					
Melrose (near)	1000	145	Apr-Sept	815	690
	950	148	Apr-July	754	642
BIRCH CREEK					
Glen (near)	18.9	144	Apr-Sept		13.1
	16.0	146	Apr-July		11.0
BOULDER RIVER					
Boulder (near)	119	151	Apr-Sept	100	78.9
	114	151	Apr-July	96.8	75.5
JEFFERSON RIVER					
Sappington (at)	1510	159	Apr-Sept		948
	1380	161	Apr-July		857
WILLOW CREEK					
Harrison (near)	24.2	156	Apr-Sept		15.5
	22.5	158	Apr-July		14.2
MADISON RIVER					
West Yellowstone (near)	276	130	Apr-Sept		212
	212	132	Apr-July		160
MADISON RIVER					
Grayling (near)(13)	635	147	Apr-Sept	502	430
	500	148	Apr-July	410	337
MADISON RIVER					
McAllister (near)(14)	1110	151	Apr-Sept	1063	734
	900	154	Apr-July	844	587
GALLATIN RIVER					
Gateway (near)	690	150	Apr-Sept	664	461
	600	152	Apr-July	572	393

(11) Adjusted for storage in Lima Reservoir.

(12) Adjusted for storage in Clark Canyon Reservoir.

(13) Adjusted for storage in Hebgen Lake.

(14) Adjusted for storage in Hebgen and Ennis Lakes.



# STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR			PAST RECORD	
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average
HYALITE CREEK					
Bozeman (near)(15)	56.5	151	Apr-Sept		37.4
	49.5	152	Apr-July		32.5
GALLATIN RIVER					
Logan (at)	750	158	Apr-Sept		473
	650	162	Apr-July		401
MISSOURI RIVER					
Toston (at)(16)	3400	161	Apr-Sept	3114	2105
	3000	163	Apr-July	2748	1836
SHEEP CREEK					
White Sulphur Springs (near)	28.4	154	Apr-Sept	30.5	18.4
	25.0	156	Apr-July	27.3	16.0
SUN RIVER					
Gibson Dam (at)(17)	810	134	Apr-Sept	555	604
	750	135	Apr-July	513	555
BELT CREEK					
Monarch (near)	194	178	Apr-Sept	222	109
	180	180	Apr-July	210	100
MISSOURI RIVER					
Fort Benton (at)(18)	5290	159	Apr-Sept		3321
	4700	164	Apr-July		2834
TWO MEDICINE CREEK					
Browning (near)(19)	334	130	Apr-Sept		256
	320	131	Apr-July		245
BADGER CREEK					
Browning (near)	170	128	Apr-Sept		133
	150	129	Apr-July		116
CUT BANK CREEK					
Cut Bank (at)	161	134	Apr-Sept		120
	150	135	Apr-July		111
MARIAS RIVER					
Shelby (near)(20)	790	131	Apr-Sept	646	604
	760	131	Apr-July	601	581

(15) Adjusted for storage in Middle Creek Reservoir.

(16) Adjusted for storage in Hebgen and Ennis Lakes and Clark Canyon Reservoir.

(17) Adjusted for storage in Gibson Reservoir and diversions.

(18) Adjusted for storage in Canyon Ferry Reservoir.

(19) Adjusted for storage in Two Medicine Reservoir and diversions into Two Medicine Canal.

(20) Adjusted for storage in Two Medicine, Four Horns, Lake Frances and Swift Reservoirs.



# STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR			PAST RECORD	
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average
MISSOURI RIVER					
Virgelle (at)(21)	6250	155	Apr-Sept		4036
	5550	158	Apr-July		3511
SOUTH FORK JUDITH RIVER					
Utica (near)	18.2	146	Apr-Sept	18.9	12.5
	17.2	147	Apr-July	17.8	11.7
MISSOURI RIVER					
Landusky (near)(21)	6800	152	Apr-Sept		4484
	6000	154	Apr-July		3889
NORTH FORK MUSSELSHELL RIVER					
Delpine (near)	9.4	170	Apr-Sept	9.0	5.5
	8.2	174	Apr-July	8.3	4.7
SOUTH FORK MUSSELSHELL RIVER					
Martinsdale (above)	67.0	145	Apr-Sept	76.7	46.2
	65.0	147	Apr-July	73.7	44.0
MISSOURI RIVER					
Fort Peck Dam (below)(22)	6600	153	Apr-Sept		4312
	5900	154	Apr-July		3824
MILK RIVER					
Eastern Crossing (at)	290	111	Apr-Sept		262
MISSOURI RIVER					
Wolf Point (near)(22)	7000	150	Apr-Sept		4683
	6300	151	Apr-July		4168
MISSOURI RIVER					
Williston, N.D. (near)(29)	17000	155	Apr-Sept	10998	10998
	15200	155	Apr-July		9823

## SASKATCHEWAN RIVER BASIN

ST. MARY RIVER					
Babb (near)(30)	588	120	Apr-Sept		492
	515	121	Apr-July		427

(21) Adjusted for storage in Canyon Ferry and Tiber Reservoirs.

(22) Adjusted for storage in Canyon Ferry, Tiber and Fort Peck Reservoirs.

(29) Adjusted for storage in Canyon Ferry, Tiber, Fort Peck, Buffalo Bill, Boysen and Yellowtail Reservoirs. Sum Yellowstone River near Sidney and Missouri River near Culbertson.

(30) Adjusted for storage in Lake Sherburne.





# STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR			PAST RECORD	
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average

## YELLOWSTONE RIVER BASIN

YELLOWSTONE RIVER					
Corwin Springs (at)	2700	144	Apr-Sept	2172	1880
	2300	146	Apr-July	1818	1575
YELLOWSTONE RIVER					
Livingston (near)	3230	152	Apr-Sept		2122
	2730	154	Apr-July		1769
BOULDER RIVER					
Big Timber (at)	510	147	Apr-Sept		347
	480	147	Apr-July		327
STILLWATER RIVER					
Absarokee (near)(25)	805	144	Apr-Sept		558
	700	148	Apr-July		474
CLARKS FORK RIVER					
Belfry (near)	840	144	Apr-Sept		582
	750	142	Apr-July		530
ROCK CREEK					
Red Lodge (near)	165	156	Apr-Sept	124	106
	130	158	Apr-July	96.6	82.1
YELLOWSTONE RIVER					
Billings (at)	6050	153	Apr-Sept	5031	3944
	5240	154	Apr-July	4342	3400
BIG HORN RIVER					
St. Xavier (near)(26)	2700	157	Apr-Sept	2105	1719
	2550	157	Apr-July	2044	1625
LITTLE BIG HORN RIVER					
Lodgegrass (near)(28)	167	136	Apr-Sept		123
	150	138	Apr-July		109
YELLOWSTONE RIVER					
Miles City (at)(27)	9100	156	Apr-Sept		5850
	8200	158	Apr-July		5177
YELLOWSTONE RIVER					
Sidney (near)(27)	9300	153	Apr-Sept		6069
	8350	153	Apr-July		5454

(25) Adjusted for storage in Mystic Lake.

(26) Adjusted for storage in Buffalo Bill, Boysen, Bull Lake and Yellowtail Reservoirs.

(27) Adjusted for storage in Buffalo Bill, Boysen and Yellowtail Reservoirs.

(28) Sum Little Big Horn below Pass Creek and Lodgegrass Creek near Wyola.



**SNOW**

DRAINAGE BASIN and/or SNOW COURSE		THIS YEAR			PAST RECORD	
		Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	Elevation				Last Year	Average

COLUMBIA RIVER BASIN
KOOTENAI RIVER

Bald Eagle Peak	5700	4/02	184	79.2	54.7	-
Banfield Mountain	5600	3/30	90	33.1	23.3	-
Banfield Mountain Pillow	5600	3/30	SP	28.1	19.3	-
Baree Creek	5500	4/01	140	54.7	42.6	49.6
Baree Midway	4600	4/01	103	41.8	35.5	38.8
Baree Trail	3800	4/01	41	16.2	13.2	7.8
Bear Mountain	5400	4/01	185	76.0	54.4	-
Bristow Creek	3900	3/30	46	17.1	13.7	-
Brush Creek	5000	3/30	47	13.2	13.0	13.1
Brush Creek Timber	5000	3/30	42	11.7	11.5	11.7
Cedar Grove	4100	4/02	49	18.2	13.5	-
Davis Creek	5400	3/31	95	36.7	21.5	-
Fernie	3500	3/31	32	10.6	7.6	8.8
Field	4200	3/31	30	6.8	3.1	5.8
Garver Creek	4250	3/31	48	16.7	10.8	-
Garver Creek Pillow	4250	3/31	SP	14.2	9.0	-
Glacier	4100	3/31	94	32.3	22.4	28.7
Graves Creek	4300	3/29	68	25.2	17.3	19.5
Gray Creek	5100	3/29	77	23.7	11.4	19.2
Halverson Creek	4850	4/01	135	57.3	41.6	-
Hawkins Lake	6450	3/31	51	15.0	23.4	-
Hawkins Lake Pillow	6450	3/31	SP	41.1	21.4	-
Keeler Creek	3300	4/01	47	20.3	11.4	-
Kicking Horse	5400	3/31	59	15.9	9.4	15.2
Kimberley	3800	3/28	32	10.5	4.8	7.5
Lost Soul	4800	3/30	57	21.2	16.5	-
Marble Canyon	5000	3/31	61	20.5	6.6	13.2
Morrissey Ridge	6100	4/01	96	35.1	19.9	29.4
New Fernie	4100	3/31	62	20.5	13.1	15.8
Poorman Creek	5100	4/02	111	45.0	33.3	-
Poorman Creek Pillow	5100	4/02	SP	42.1	19.2	-
Red Mountain	6000	4/01	73	25.9	16.1	20.3
Sinclair Pass	4500	3/31	28	7.2	3.2	5.2
Stahl Peak	6050	3/29	121	48.4	35.1	-
Sullivan Mine	5100	3/30	56	17.6	10.0	14.6
Upper Elk River	4400	3/29	33	9.2	5.0	7.4
Weasel Divide	5450	3/29	118	45.3	30.0	35.3

SP - Snow pillow observation - water content only.





# SNOW

DRAINAGE BASIN and/or SNOW COURSE		THIS YEAR			PAST RECORD	
		Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	Elevation				Last Year	Average

## FLATHEAD RIVER

Bassoo Peak	5150	4/01	42	14.8	12.8	12.2
Beaver Lake	5900	4/04	87	34.7	-	24.0
Big Creek	6750	3/30	135	57.2	51.2	46.7
Camp Misery	6400	4/05	143	59.6	51.6	46.8
Desert Mountain	5600	4/01	53	20.0	16.7	16.3
Fatty Creek	5500	3/30	80	29.8	29.8	22.8
Griffin Creek Divide	5150	3/31	47	15.8	13.2	12.6
Gunsight Lake	6300	4/04	117	45.9	41.5	41.0
Hell Roaring Divide	5770	4/02	95	37.4	31.4	33.1
Holbrook	4530	3/31	41	13.5	11.4	10.4
Kishenehn	3890	4/01	34	11.2	7.1	9.6
Logan Creek	4300	3/30	32	9.5	8.4	8.6
Marias Pass	5250	3/26	82	30.2	20.2	18.8
Mineral Creek	4000	3/29	76	26.5	19.2	21.4
Noisy Creek	3600	3/31	14	4.4	7.6	-
North Fork Jocko	6330	3/31	147	60.0	49.6	47.2
Spotted Bear Mountain	7000	4/04	56	20.3	17.4	15.1
Trinkus Lake	6100	4/04	127	49.5	49.2	44.2
Twin Creeks	3580	4/04	42	17.9	13.5	11.4
Upper Holland Lake	6200	4/04	124	48.3	33.2	36.1

## CLARK FORK RIVER

Black Pine	7100	4/01	50	16.5	13.4	14.1
Black Pine Pillow	7100	4/01	SP	16.2	13.3	14.1
Combination	5600	4/01	16	5.4	6.2	-
Copper Bottom	5200	4/01	47	17.4	-	-
Copper Creek	5700	4/01	60	25.4	14.6	15.1
Copper Lake Creek	6100	4/01	91	37.1	-	-
Cotter Mine	6250	4/01	87	37.7	20.6	17.2
Coyote Hill	4200	3/30	38	13.2	14.2	10.4
El Dorado Mine	7800	3/30	73	26.4	25.0	21.2
Fred Burr Pass	8000	3/29	84	29.6	24.8	26.6
Gold Creek Lake	7200	3/30	56	19.4	17.6	15.9
Heart Lake Trail	4800	3/30	79	33.2	20.8	23.0
Hoodoo Basin	6000	3/30	157	67.8	47.8	54.5
Hoodoo Basin Pillow	6000	4/01	SP	68.3	48.6	-
Hoodoo Creek	5900	3/30	157	64.2	44.1	50.6
Intergaard	6450	4/01	31	9.2	7.9	8.5
Lookout	5250	4/01	131	49.8	34.6	38.4

SP - Snow pillow observation - water content only.



# SNOW

DRAINAGE BASIN and/or SNOW COURSE		THIS YEAR			PAST RECORD	
		Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	Elevation				Last Year	Average

## CLARK FORK RIVER (Continued)

Lubrecht Flume	4800	3/31	22	6.0	-	-
Lubrecht Flume Pillow	4800	3/31	SP	5.6	-	-
Lubrecht Forest No. 3	5450	3/31	26	7.4	7.6	7.4
Lubrecht Forest No. 4	4650	3/31	8	2.2	3.5	2.9
Lubrecht Forest No. 6	4040	3/29	4	1.6	3.0	3.0
Lubrecht Hydroplot	4200	3/31	14	4.4	-	-
North Fork Elk Creek	6250	3/30	43	13.6	-	-
North Fork Elk Creek Pillow	6250	3/30	SP	13.3	-	-
Peterson Meadows	7200	3/30	40	11.6	-	-
Peterson Meadows Pillow	7200	3/30	SP	13.2	-	-
Red Lion	7100	3/29	58	18.4	16.5	16.6
Skalkaho Summit	7260	4/01	89	33.2	27.2	26.4
Slide Rock Mountain	7100	3/31	59	20.0	15.0	15.4
Southern Cross	6500	4/01	23	7.7	6.8	7.4
Storm Lake	7780	3/31	55	17.4	14.0	14.6
Stuart Mill	6500	4/01	23	7.6	14.0	7.1
Stuart Mountain	7400	4/01	102	42.6	34.0	32.2
TV Mountain	6800	3/30	74	24.7	20.7	18.5

## BITTERROOT RIVER

Ambrose	6480	3/29	48	15.4	11.6	13.7
East Fork Ranger Station	5400	3/31	21	6.0	6.2	7.1
Gibbons Pass	7100	3/24	83	31.5	24.3	23.0
Lolo Pass	5230	3/24	96	35.9	30.4	33.8
Lost Horse	5940	4/01	109	43.2	32.9	33.0
Moose Creek	6200	3/30	64	23.6	17.9	16.2
Nez Perce Camp	5680	4/02	49	18.6	16.4	15.2
Nez Perce Pass	6570	4/02	57	21.2	18.8	16.8
Saddle Mountain	7940	3/31	94	34.4	26.4	25.8
Saddle Mountain Pillow	7940	3/31	SP	39.2	27.6	-
Savage Pass	6600	3/24	91	32.6	23.3	28.6
Twelvemile Creek	5600	4/01	76	30.6	24.1	-
Twelvemile Creek Pillow	5600	4/01	SP	27.3	19.8	-
Twin Lakes	6510	4/01	140	53.6	40.7	45.0
Twin Lakes Pillow	6400	4/01	SP	54.1	39.0	-

SP - Snow pillow observation - water content only.



# SNOW

DRAINAGE BASIN and/or SNOW COURSE		THIS YEAR			PAST RECORD	
		Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	Elevation				Last Year	Average

## MISSOURI RIVER BASIN

### BEAVERHEAD RIVER

Bloody Dick	7600	4/01	51	16.2	12.4	11.1
Camp Creek	6800	3/29	49	17.0	9.6	9.0
Carter Creek	7400	4/03	28	7.3	8.9	5.8
Dad Creek Lake	8400	4/03	60	20.8	-	13.0
Elk Horn Springs	7800	4/01	42	12.6	10.0	9.8
Gold Stone	8100	4/01	65	21.9	17.2	14.8
Kilgore	6200	3/29	47	18.2	14.1	8.9
Lakeview Canyon	6930	3/31	61	20.6	11.5	11.5
Lakeview Ridge	7400	3/31	50	16.2	11.3	10.0
Lemhi Pass	7480	3/31	41	12.3	9.5	8.5
Lemhi Ridge	8100	3/31	49	15.2	9.4	-
Sawtelle Mountain	8715	3/29	123	48.6	34.8	-
Trail Creek	7090	3/31	40	12.0	8.6	8.4
White Pine Ridge	8850	4/03	28	6.6	-	5.2

### RUBY RIVER

Branham Lakes	8850	3/29	103	42.5	36.0	-
Clover Meadow	8600	4/03	74	27.7	21.1	16.0
Divide	7900	4/03	56	19.9	-	9.7
Middle Mill Creek	7850	3/29	65	24.5	21.0	-
Notch	8500	4/03	66	24.0	-	13.6
Smuggler Mine	6960	3/29	42	13.8	13.6	-

### BIG HOLE RIVER

Abundance Lake	8800	4/03	72	27.6	23.0	19.8
Calvert Creek	6450	4/02	45	14.7	13.6	-
Darkhorse Lake	8600	4/04	98	40.7	29.2	27.0
Foolhen	8280	4/03	65	24.4	18.5	17.8
Jahnke Lake Trail	7200	4/01	48	15.2	11.8	-
Mudd Lake	7650	4/02	72	26.9	18.4	-
Palisade Creek	8250	4/02	104	43.0	32.9	-
Slag-A-Melt Lake	8750	4/04	91	37.8	-	-

### JEFFERSON RIVER

Berry Meadow	7300	4/05	30	9.0	7.7	7.6
Copper Mountain	7700	3/31	41	12.2	12.9	11.3
Nez Perce Creek	6500	3/31	14	3.9	6.8	-
Picnic Grounds	6500	4/01	15	4.1	5.0	4.6
Pipestone Pass	7200	3/29	18	4.9	6.0	6.0
Rocker Peak	8000	4/05	59	21.3	16.0	-
Rocker Peak Pillow	8000	4/05	SP	19.2	14.6	-
Uncle Sam Gulch	6500	4/05	24	7.4	8.4	-





## SNOW

DRAINAGE BASIN and/or SNOW COURSE		THIS YEAR			PAST RECORD	
		Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	Elevation				Last Year	Average

MADISON RIVER

Big Springs	6500	3/29	80	30.8	23.2	20.8
Black Canyon	7850	3/30	121	46.8	35.2	34.6
Black Moose	8125	3/30	136	54.0	39.2	40.4
Call Road	8050	4/03	53	17.9	14.7	10.8
Four Mile	6900	3/29	35	10.6	10.0	8.0
Hebgen Dam	6550	3/25	46	15.6	13.6	11.3
Island Park	6315	3/29	68	25.2	19.4	15.6
Jack Creek	7500	3/30	28	9.1	7.2	6.0
Lake Creek	6100	4/01	36	11.9	10.6	7.8
Latham Springs	7650	3/30	116	46.6	33.6	33.5
Lion Mountain	8760	3/31	76	25.6	21.7	-
Lion Mountain Pillow	8760	3/31	SP	15.5	15.6	-
Lower Twin	7900	3/29	80	29.8	25.2	19.0
Lucky Dog	6900	3/30	95	36.2	26.4	24.8
Madison Plateau	7750	3/30	91	35.4	23.6	-
Madison Plateau Pillow	7750	3/30	SP	37.0	25.2	-
Meridian Creek	7000	4/01	44	14.1	11.1	9.5
Norris Basin	7500	4/02	47	15.0	12.3	10.1
North Meadow	7500	3/29	38	10.8	9.6	7.9
Old Road	7250	3/30	102	41.0	29.8	27.3
Poachers Cabin	8000	3/30	107	45.4	30.6	33.6
Potomageton Park	7150	3/31	58	19.6	15.4	15.4
Sentinel Creek	8300	3/31	90	33.0	25.0	23.6
Soap Bogus Divide	7600	4/01	68	24.2	20.6	-
Targhee Pass	7000	3/29	66	23.1	15.6	13.8
Tepee Creek	8000	4/01	66	23.8	17.6	13.4
Valley View	6500	3/29	69	26.1	16.4	15.9
West Yellowstone	6700	3/25	52	17.9	12.3	10.8
West Yellowstone Pillow	6700	3/28	SP	14.9	7.3	-
Whiskey Creek	6800	3/30	81	31.1	22.0	-

GALLATIN RIVER

Arch Falls	7350	3/29	55	17.1	19.2	12.6
Bear Basin	8150	4/01	90	31.8	26.4	20.2
Bridger Bowl	7250	3/31	114	43.2	38.6	27.6
Bridger Bowl Pillow	7250	3/31	SP	39.7	36.8	26.6
Carrot Basin	9000	4/02	136	59.4	39.9	-
Carrot Basin Pillow	9000	4/02	SP	41.1	-	-
Devils Slide	8100	3/29	86	29.8	32.6	22.4
Hood Meadow	6600	3/29	44	14.7	16.2	9.8
Lick Creek	6860	3/30	43	13.2	15.5	10.2
Lick Creek Pillow	6860	3/30	SP	15.0	15.7	10.1
Little Park	7400	4/01	71	23.8	19.3	15.4
Maynard Creek	6210	3/31	74	26.5	26.4	16.7
Maynard Creek Pillow	6210	3/31	SP	15.5	17.6	-
New World	6700	3/31	54	16.1	17.3	11.0
Shower Falls	8100	3/29	97	35.3	36.7	26.8
Shower Falls Pillow	8100	3/29	SP	29.8	32.0	23.5
Twenty-One Mile	7150	3/25	74	27.3	17.0	17.4

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Average based on 1953-67 period. SP - Snow pillow observation - water content only.



# SNOW

DRAINAGE BASIN and/or SNOW COURSE		THIS YEAR			PAST RECORD	
		Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	Elevation				Last Year	Average

## MISSOURI RIVER (Main Stem)

Boulder Mountain	7950	3/29	79	29.4	22.7	16.8
Chessman Reservoir	6200	4/01	15	4.8	4.1	4.2
Deadman Creek	6450	4/01	46	15.4	18.1	11.4
Deadman Creek Pillow	6450	4/01	SP	13.6	15.4	-
Elk Peak	8000	3/30	68	23.8	22.0	16.9
Grasshopper	7000	3/30	24	7.2	7.0	5.4
Kings Hill	7500	4/02	58	18.4	21.7	13.2
Stemple Pass	6600	3/30	43	13.0	8.6	10.8
Ten Mile Lower	6600	4/01	27	8.0	5.9	6.9
Ten Mile Middle	6800	3/31	46	14.0	9.4	10.8
Ten Mile Upper	8000	3/31	56	18.1	13.1	14.0

## SUN-TETON-MARIAS RIVERS

Badger Pass	6900	4/04	134	58.4	43.0	37.2
Blue Lake	5900	4/04	94	36.6	26.4	-
Cabin Creek	5200	3/31	33	10.1	6.6	7.3
Five-Bull	5700	4/04	32	10.1	10.0	6.9
Freight Creek	6000	4/04	60	26.6	14.5	16.6
Goat Mountain	7000	3/30	50	16.1	11.1	11.7
Mount Lockhart	6400	4/06	83	31.5	24.0	-
Mount Lockhart Pillow	6400	4/06	SP	31.9	29.8	-
Waldron	5600	4/06	46	17.2	12.0	-
Waldron Pillow	5600	4/06	SP	15.8	11.5	-
Wrong Creek	5700	4/03	67	22.8	14.1	16.0
Wrong Ridge	6800	4/02	82	28.7	23.1	21.9

## JUDITH RIVER

Avalanche	7100	4/02	79	23.9	36.0	-
Big Snowy	7150	4/02	77	24.2	-	-
Crystal Lake	6100	4/02	55	17.8	23.8	12.8
Rock Creek	5600	4/02	35	10.6	16.0	8.8
Spur Park	8000	4/01	84	29.0	29.1	21.5
Spur Park Pillow	8000	4/01	SP	27.6	28.2	-

## MUSSELSHELL RIVER

Daisy Peak	7600	3/30	46	13.4	12.3	-
Eagle Creek	7000	3/22	54	16.4	19.0	-
Forest Lake	6400	3/22	47	14.0	16.0	-
Haymaker	8050	3/23	51	15.0	17.6	-
Johnson Park	6450	3/30	33	9.7	8.0	-

SP - Snow pillow observation - water content only.





# SNOW

DRAINAGE BASIN and/or SNOW COURSE		THIS YEAR			PAST RECORD	
		Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	Elevation				Last Year	Average

## MILK RIVER

Bear Paw Ski Area	5200	3/31	36	11.8	12.0	-
King Creek Saddle	4550	4/04	27	8.2	-	-
King Springs	4150	4/04	19	6.3	-	-
Mission Mountain	5050	4/04	30	8.7	-	-
Rocky Boy	4700	3/31	27	7.6	6.6	4.5
Rocky Boy Pillow	4700	3/31	SP	9.7	6.5	-

## ST. MARY RIVER

Hudson Bay Divide	5800	3/30	74	25.8	18.0	18.9
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## SASKATCHEWAN (BOW) RIVER

Bow River #1	5100	3/29	38	10.2	4.7	9.4
Chateau Lawn #8	5700	3/29	50	14.0	6.0	11.3
Mirror Lake #6	6600	3/29	46	14.5	6.0	12.7
Mount Eisenhower #10	5000	3/30	34	7.4	2.9	4.9
Upper Pipestone #2	5300	3/30	40	9.9	8.2	9.0

## UPPER YELLOWSTONE RIVER

Bald Ridge	7500	3/31	54	15.9	18.2	12.5
Camp Senia	7890	3/29	20	7.6	11.4	6.4
Canyon	7750	3/31	67	21.0	16.3	16.1
Cooke Station	8150	3/30	81	28.3	23.9	19.0
Crevice Mountain	8400	3/29	42	12.6	11.3	8.8
East Entrance	7000	3/31	25	13.3	10.0	9.7
Fisher Creek	9100	3/30	146	61.0	41.0	36.1
Fisher Creek Pillow	9100	3/30	SP	54.2	38.4	-
Grizzly Peak	8400	4/01	75	23.2	19.4	16.5
Independence	8000	4/02	79	29.8	20.0	18.2
Lake Camp	7850	3/31	52	15.0	8.5	9.9
Lupine Creek	7300	4/03	47	13.8	11.6	10.3
Mill Creek	7500	4/02	56	17.8	18.7	-
Monument Peak	9000	4/02	103	38.8	28.4	24.8
Northeast Entrance	7400	3/31	43	13.2	10.8	9.1
Northeast Entrance Pillow	7350	4/03	SP	13.0	11.6	-
Porcupine Ranger Station	6500	3/31	35	9.4	11.7	7.6
Sacajawea	6550	3/31	56	19.6	23.0	13.0
South Fork Shields	8100	3/31	96	32.6	32.8	24.1
Sylvan Pass	7100	3/31	62	20.4	15.5	13.4
Thumb Divide	7900	3/30	96	35.0	23.2	22.5
Timberline Creek	8850	3/29	63	17.8	18.4	15.5
West Rosebud	7500	4/02	53	17.1	13.4	10.6
White Mill	8700	3/30	107	41.1	31.2	25.8





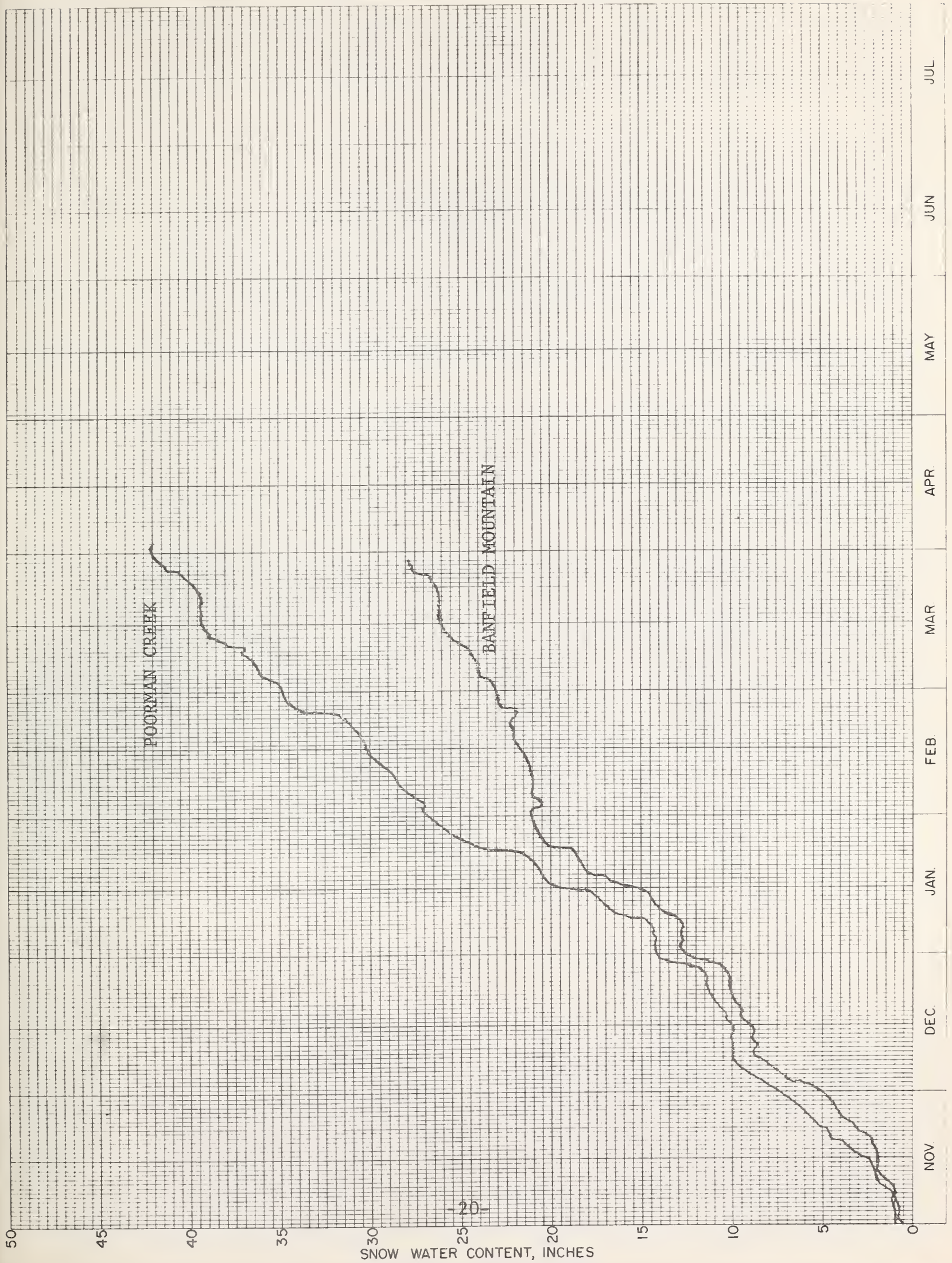
SNOW PILLOW DATA  
WATER YEAR 1971

No. \_\_\_\_\_

Elev. \_\_\_\_\_

Drainage: \_\_\_\_\_

KOOTENAI





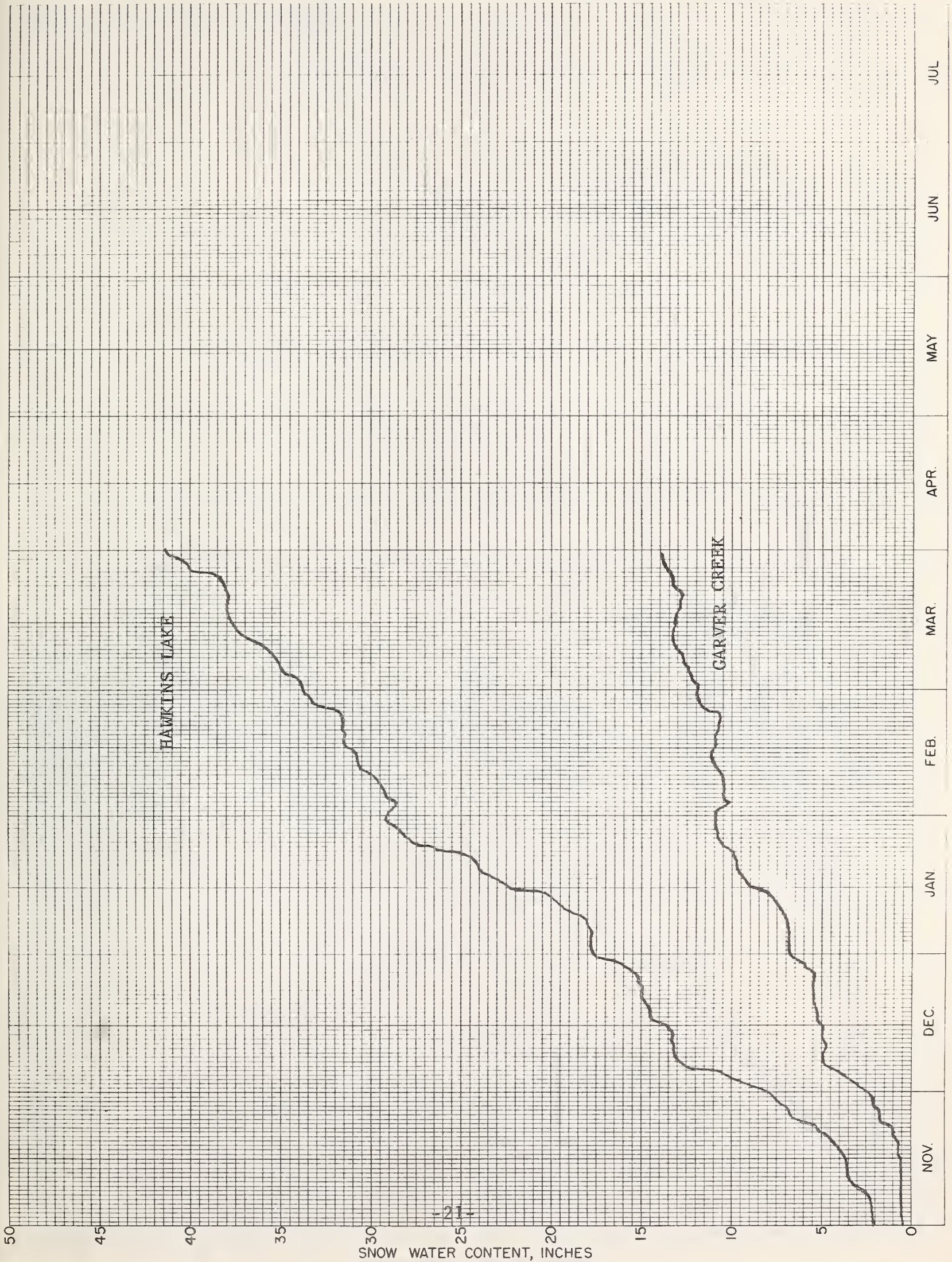


SNOW PILLOW DATA  
WATER YEAR 1971

No. \_\_\_\_\_

Elev. \_\_\_\_\_

Drainage: KOOTENAI



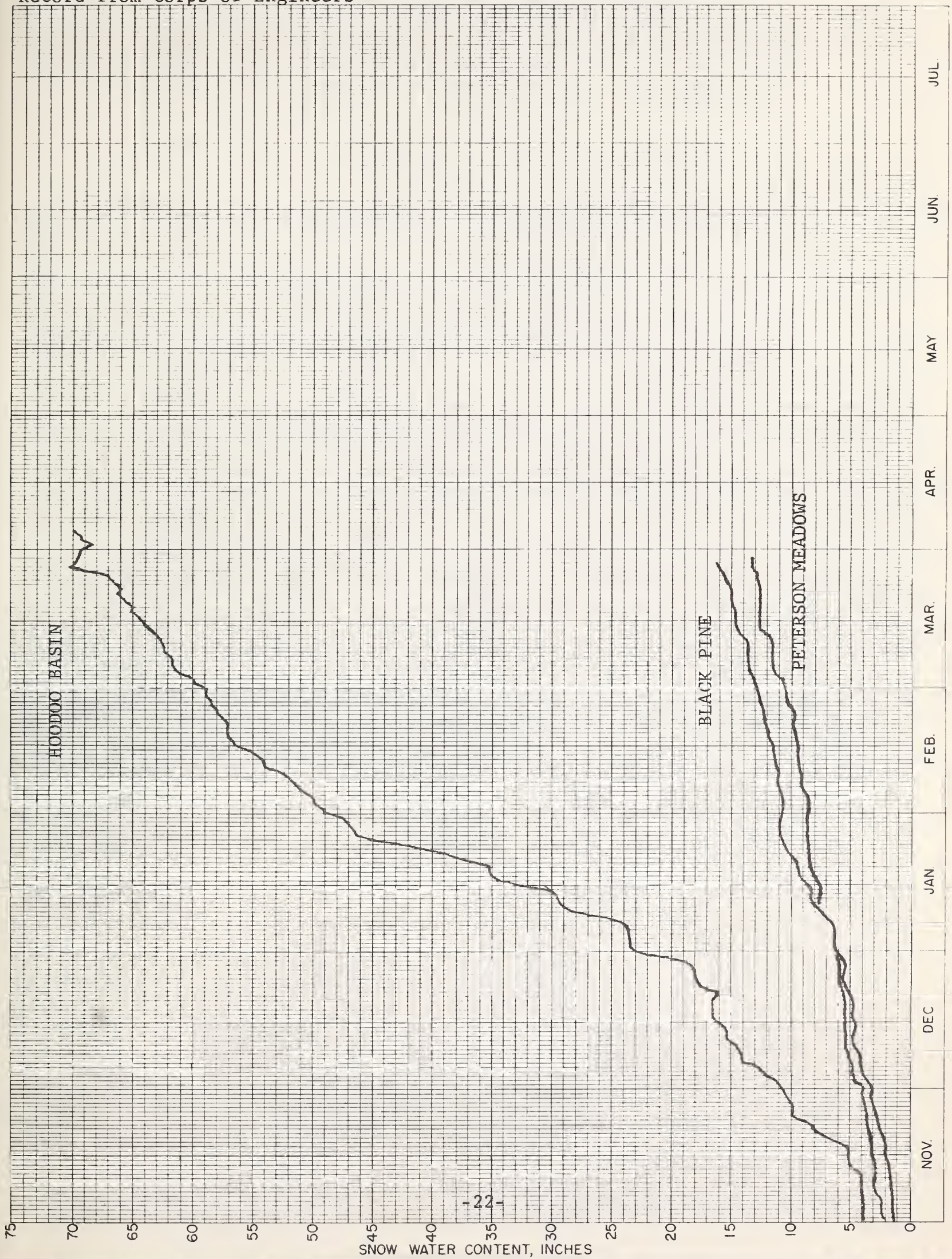




SNOW PILLOW DATA  
WATER YEAR 1971

No. \_\_\_\_\_ Elev. \_\_\_\_\_  
Record from Corps of Engineers

Drainage: CLARK FORK

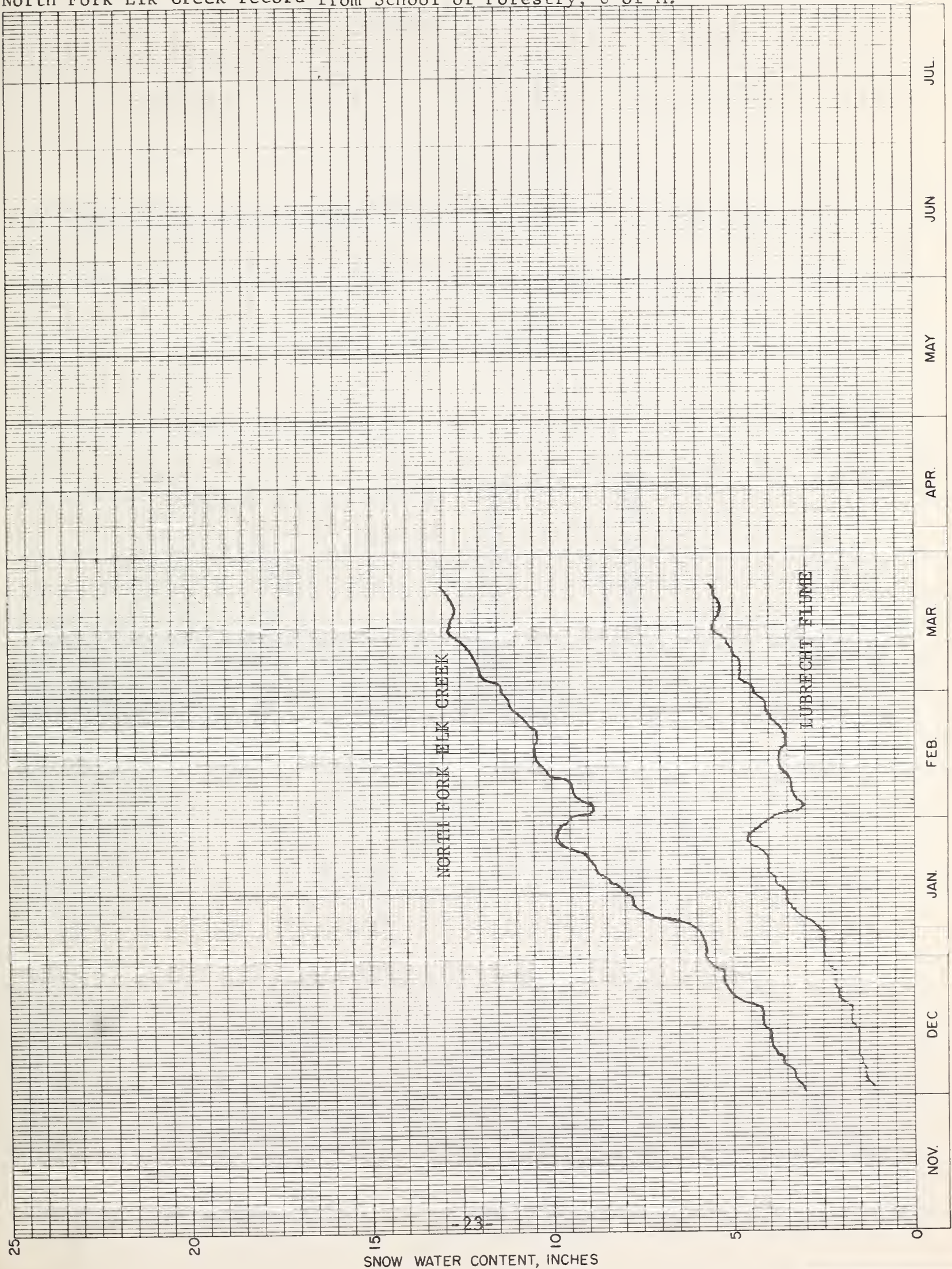






SNOW PILLOW DATA  
WATER YEAR 1971

No. \_\_\_\_\_ Elev. \_\_\_\_\_ Drainage. BLACKFOOT  
North Fork Elk Creek record from School of Forestry, U of M.

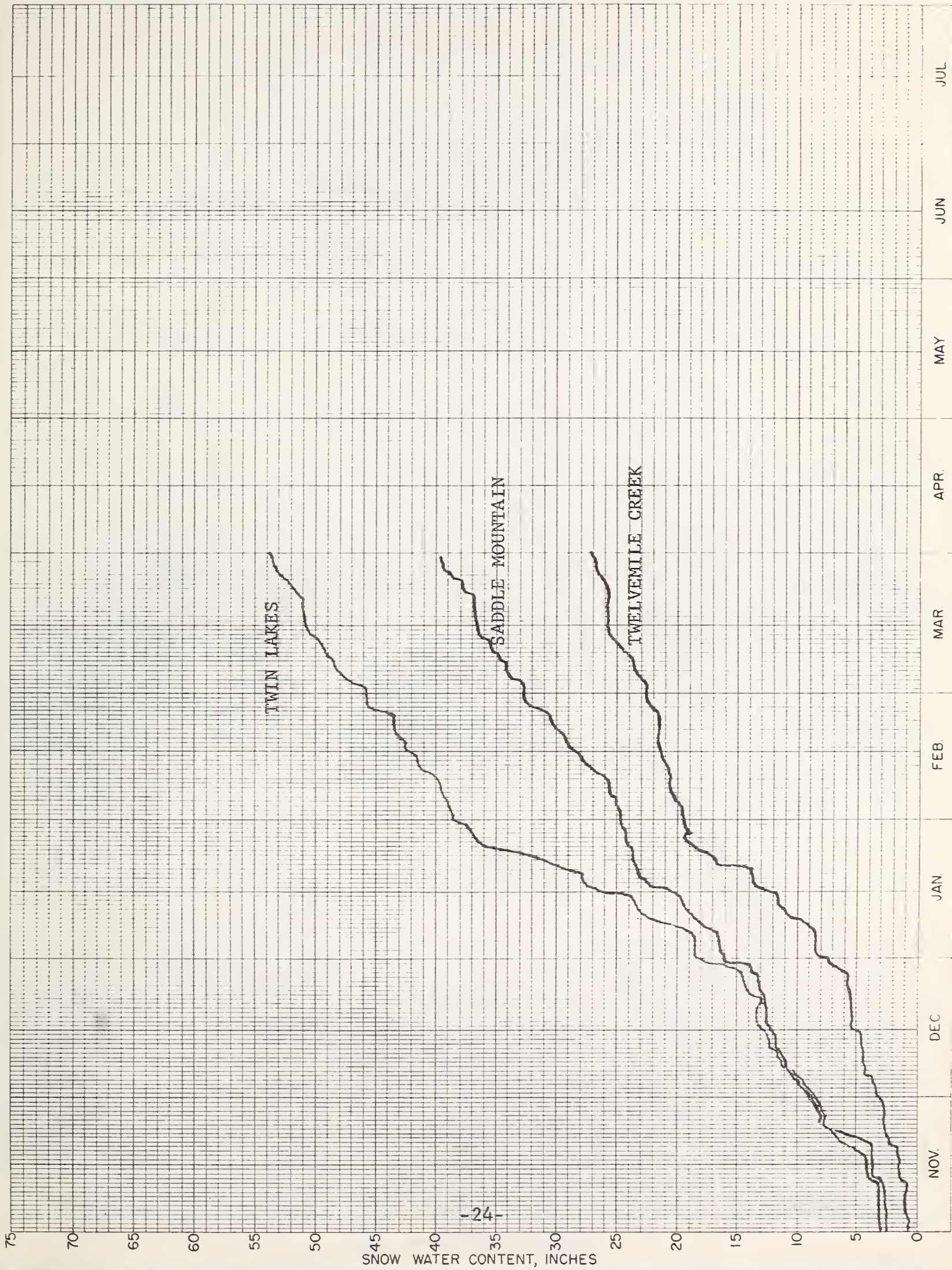






SNOW PILLOW DATA  
WATER YEAR 1971

No. \_\_\_\_\_ Elev. \_\_\_\_\_ Drainage: BITTERROOT



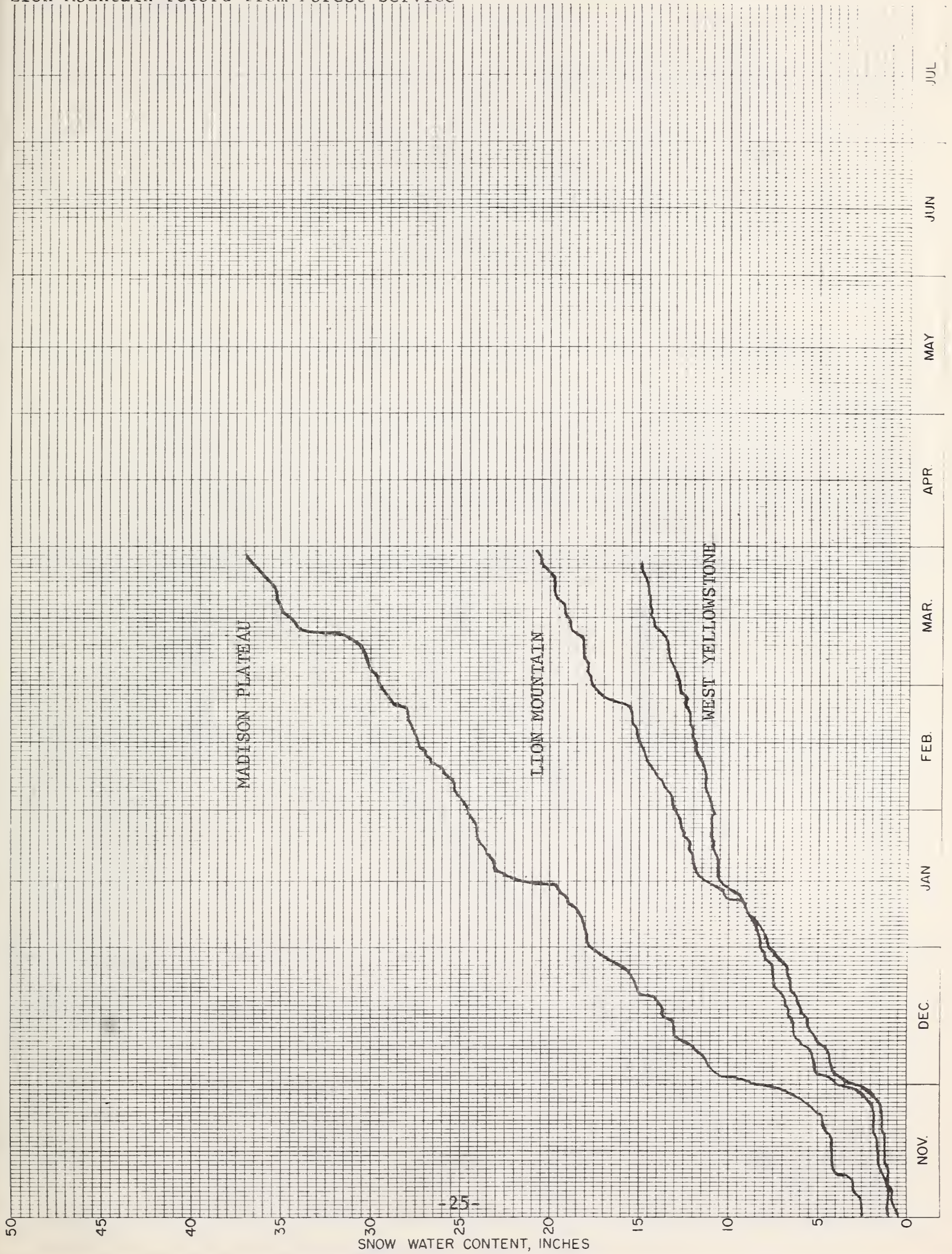




SNOW PILLOW DATA  
WATER YEAR 1971

No. \_\_\_\_\_ Elev. \_\_\_\_\_  
Lion Mountain record from Forest Service

Drainage: MADISON

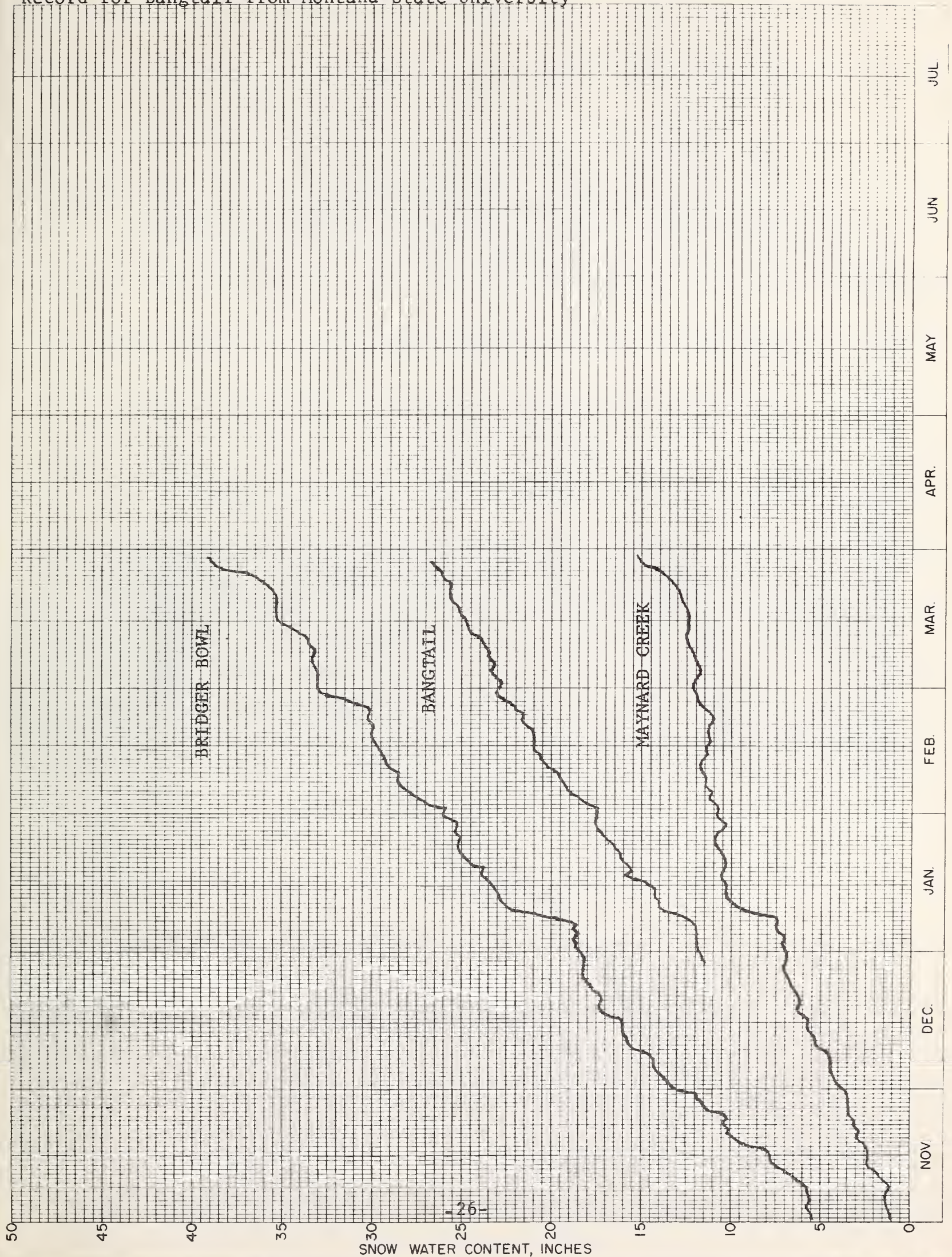






SNOW PILLOW DATA  
WATER YEAR 1971

No. \_\_\_\_\_ Elev. \_\_\_\_\_ Drainage: GALLATIN  
Record for Bangtail from Montana State University

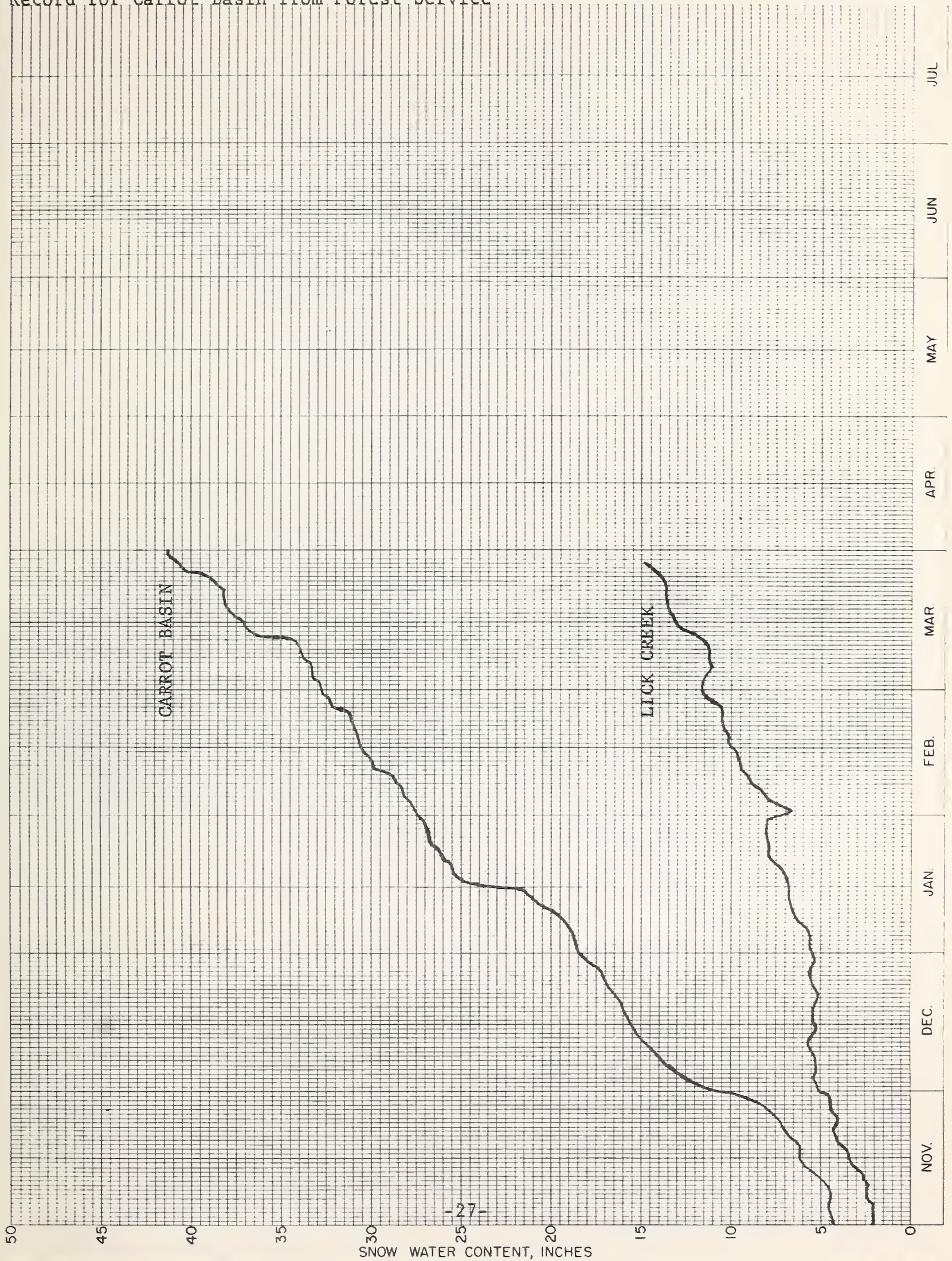






SNOW PILLOW DATA  
WATER YEAR 1971

No. Elev. Drainage: GALLATIN  
Record for Carrot Basin from Forest Service





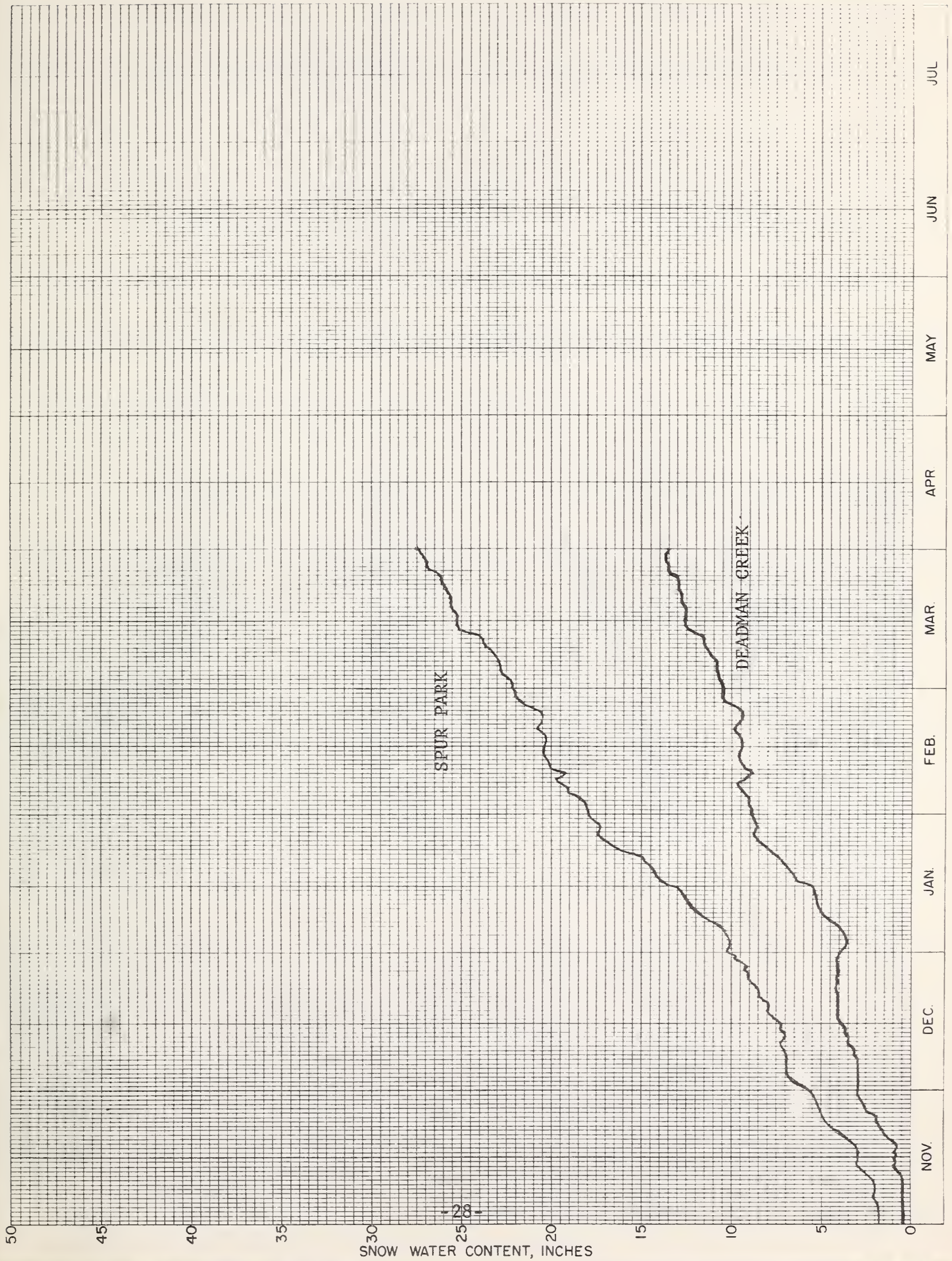


SNOW PILLOW DATA  
WATER YEAR 1971

No. \_\_\_\_\_

Elev. \_\_\_\_\_

Drainage: JUDITH-JEFFERSON-MISSOURI





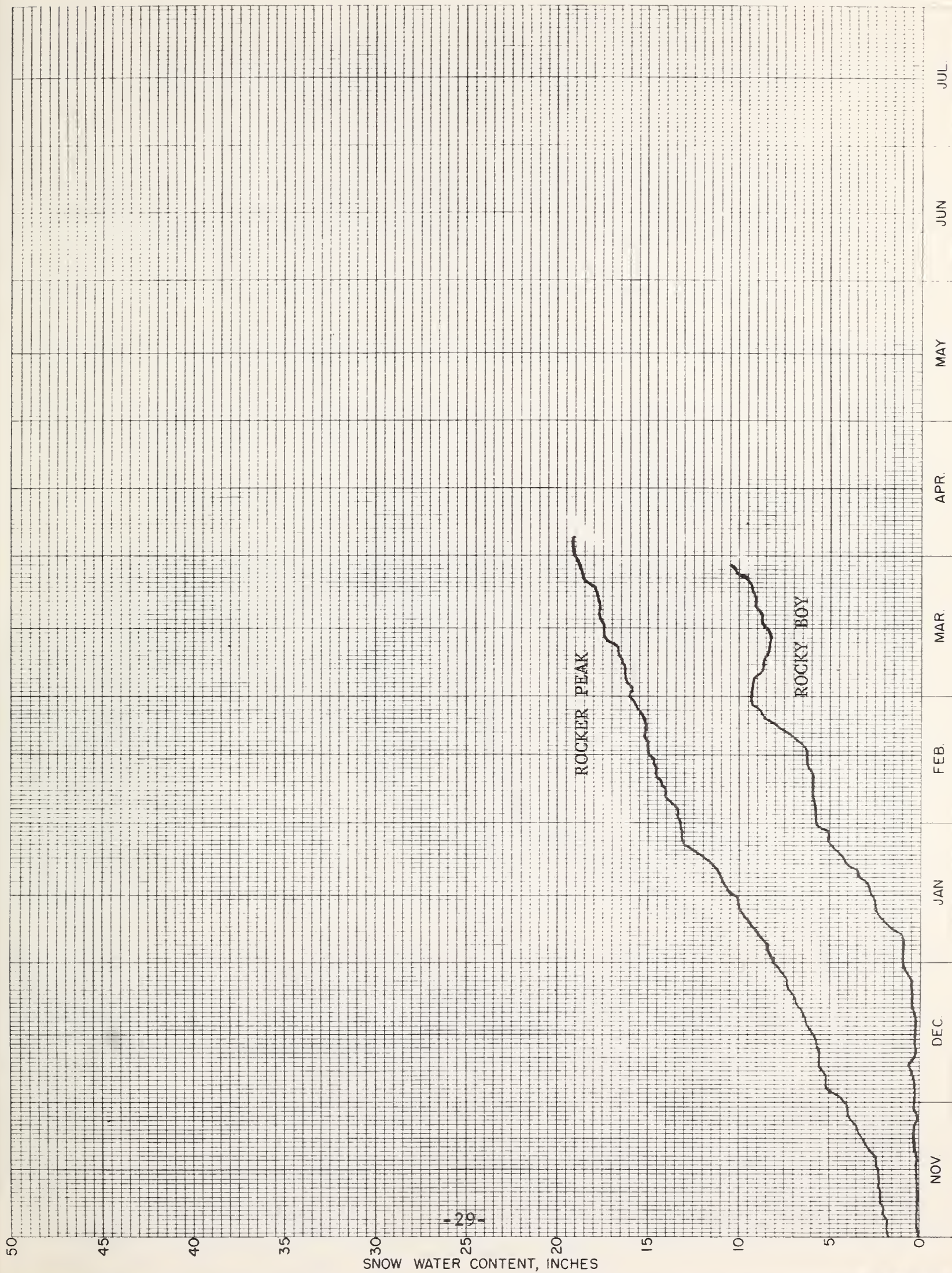


SNOW PILLOW DATA  
WATER YEAR 1971

No. \_\_\_\_\_

Elev. \_\_\_\_\_

Drainage: JUDITH-JEFFERSON-MISSOURI







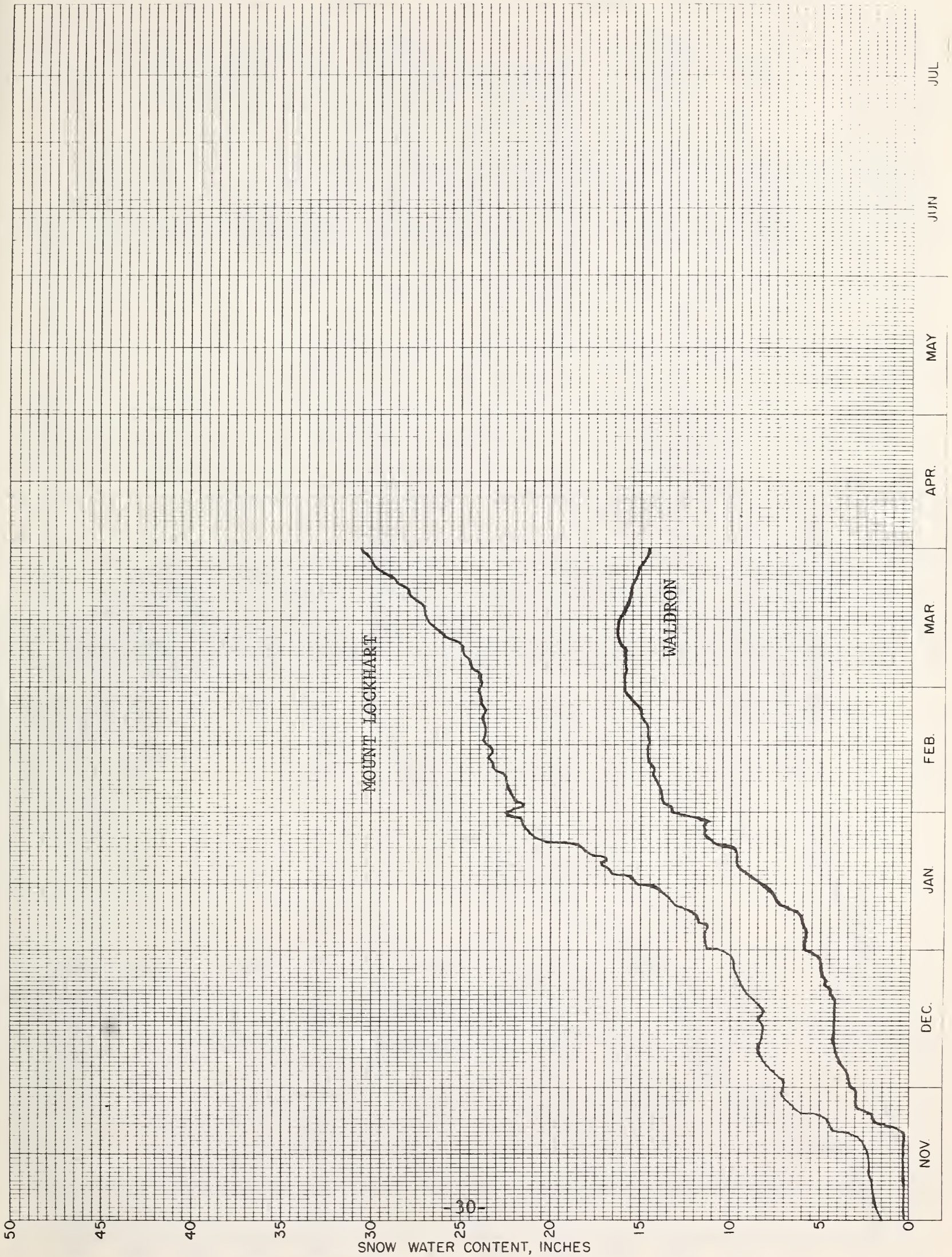
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WATER YEAR 1971

No. \_\_\_\_\_

Elev. \_\_\_\_\_

Drainage: \_\_\_\_\_

SUN

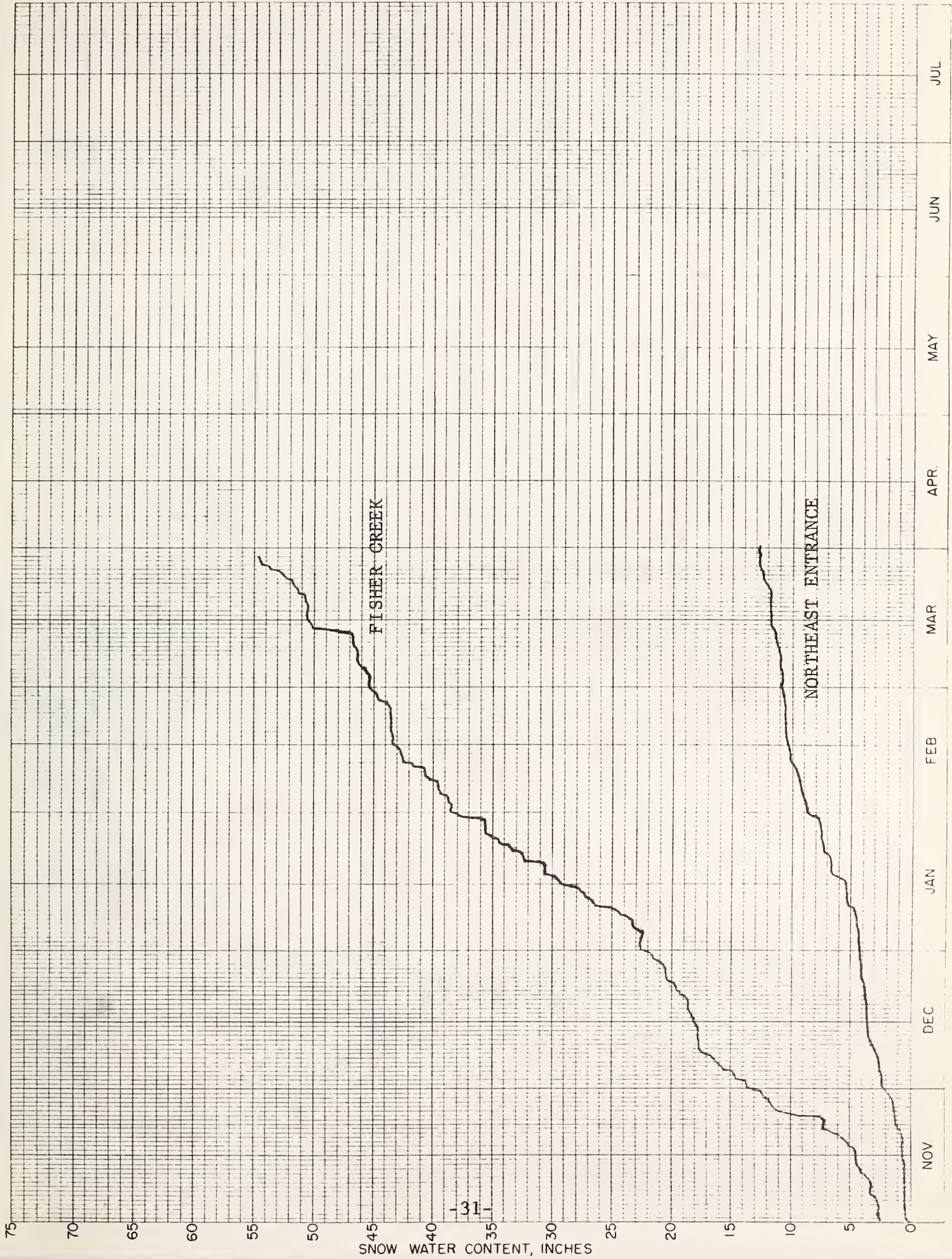






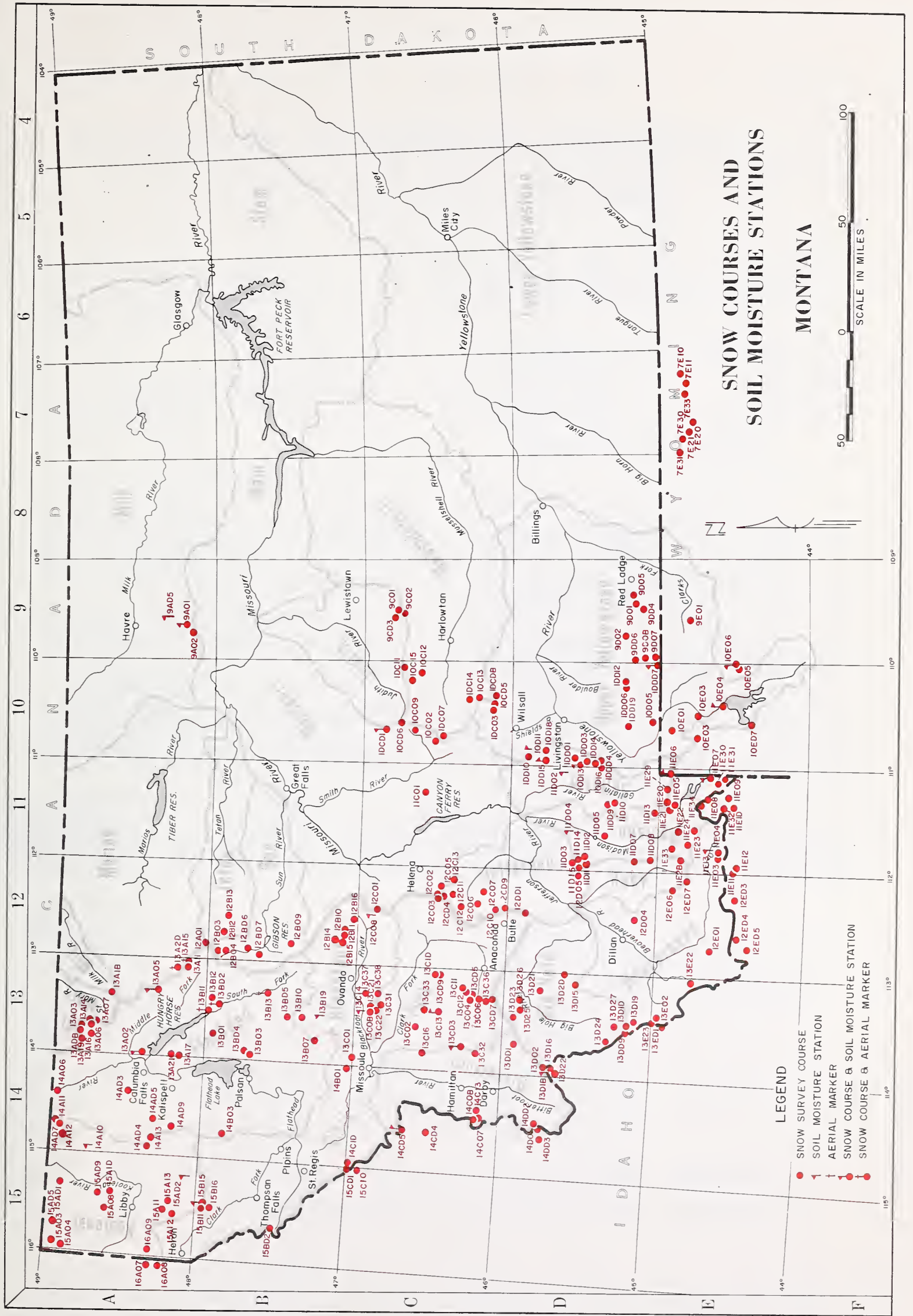
SNOW PILLOW DATA  
WATER YEAR 1971

No. \_\_\_\_\_ Elev. \_\_\_\_\_ Drainage: YELLOWSTONE













# Agencies and Organizations Cooperating in Montana Snow Surveys

U. S. Forest Service  
Region I, Missoula, Montana  
Montana Forests and Ranger  
Districts

U. S. Geological Survey  
Helena, Montana  
Portland, Oregon

U. S. Army Corps of Engineers  
Portland, Oregon  
Seattle, Washington  
Walla Walla, Washington  
Omaha, Nebraska

U. S. Indian Irrigation Service  
St. Ignatius, Montana

U. S. Weather Bureau  
Helena, Montana  
Portland, Oregon  
Kansas City, Missouri

U. S. Bureau of Sports Fisheries  
and Wildlife  
Red Rock Lakes Refuge  
Monida, Montana

U. S. Bureau of Reclamation  
Billings, Montana  
Boise, Idaho

U. S. Bonneville Power Administration  
Portland, Oregon

U. S. Soil Conservation Service  
Montana, Wyoming, Idaho

Soil and Water Conservation Districts  
Montana Counties

U. S. National Park Service  
Yellowstone National Park  
Glacier National Park

Montana Power Company  
Butte, Montana

Montana Water Resources Board  
Helena, Montana

North Montana Branch Station  
Agricultural Experiment Station  
Havre, Montana

Montana State University  
Agricultural Experiment Station  
Bozeman, Montana

University of Montana  
School of Forestry  
Missoula, Montana

Water Rights Branch, Dept. of  
Lands and Forests  
Victoria, British Columbia

Department of Energy, Mines and  
Resources  
Calgary, Alberta

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## FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS

Furnishes the basic data  
necessary for forecasting  
water supply for irrigation,  
domestic and municipal water  
supply, hydro-electric power  
generation, navigation,  
mining and industry

*"The Conservation of Water begins  
with the Snow Survey"*